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Tange

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[54] **GOLF BALL DISPENSER AND SETTER**

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[51] **Int. Cl.**[5] **A63B 57/00**

[52] **U.S. Cl.** **273/201**

[58] **Field of Search** 273/201

[56] **References Cited**

U.S. PATENT DOCUMENTS

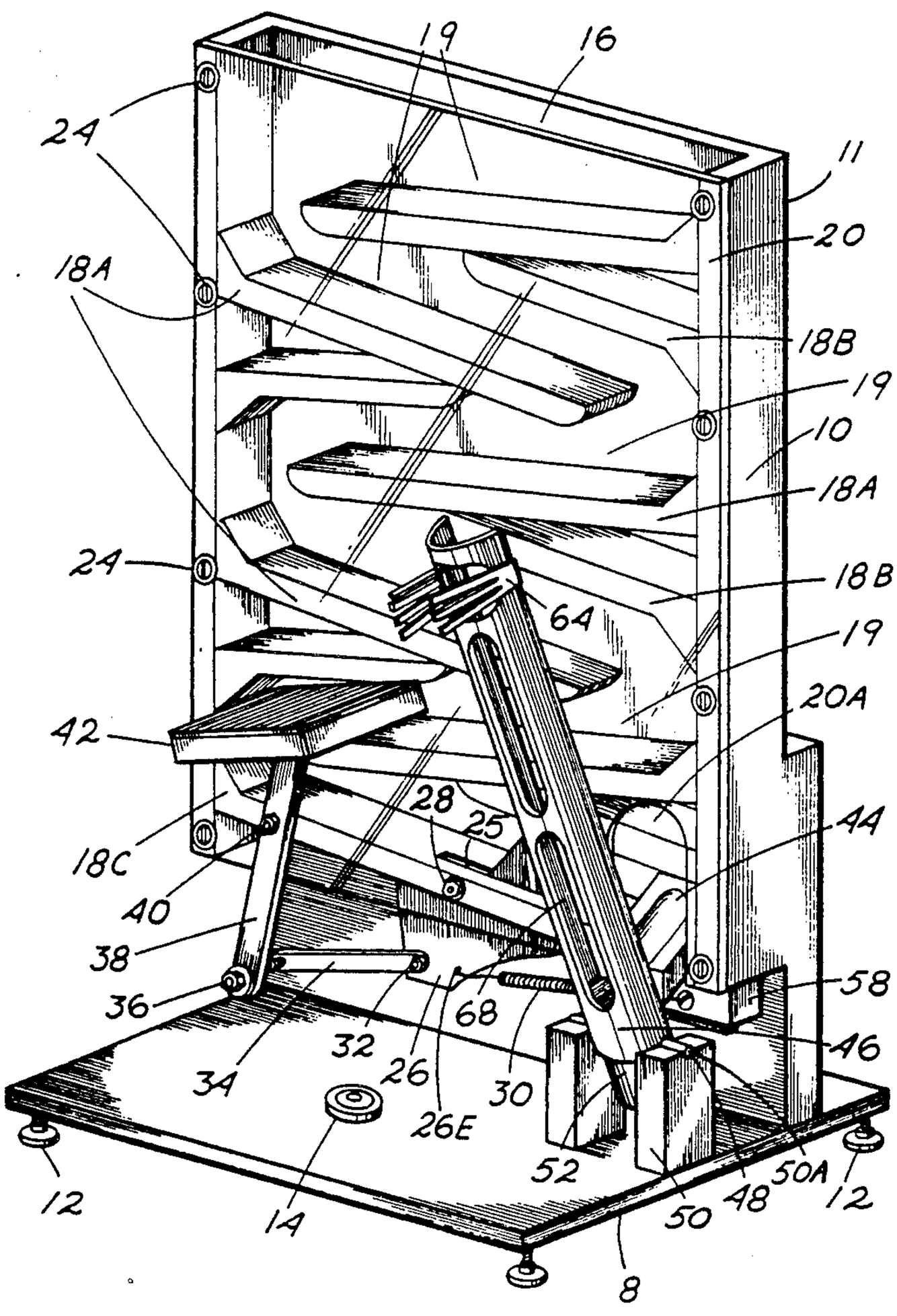
3,599,983	8/1971	Melton .	
3,778,067	12/1973	Gentiluomo .	
3,966,213	6/1976	Bradley	273/201
4,355,811	10/1982	Williams, Sr. .	

Primary Examiner—Theatrice Brown

[57] **ABSTRACT**

A lightweight, manually portable apparatus includes an adjustable, horizontally disposed base having a vertically rising, and partially transparent ball storage housing affixed thereto. The storage housing is internally baffled to store a number of balls in a zigzagging, vertically rising single column. A pivotally attached ball selector is positioned adjacent a ball dispensing aperture of the storage housing. The selector will allow the separation of one ball at a time from the single column of stored balls. After selection, the selected ball rolls downhill and leaves the storage housing to come to rest against a first end of an elongated pivotally attached vertical delivery chute. The delivery chute pivots downward under the weight of the ball resting thereon. The ball rolls downhill toward a second end of the chute and drops through an aperture in the delivery chute to be deposited onto a playing surface. A counterweight attached to the first end of the chute causes the chute to pivot back to a vertical position after setting the ball. The delivery chute is disengagable when struck by a golf club, and the selector is specifically structured to maintain the stored balls within the storage housing with the delivery chute disengaged from the apparatus.

6 Claims, 5 Drawing Sheets



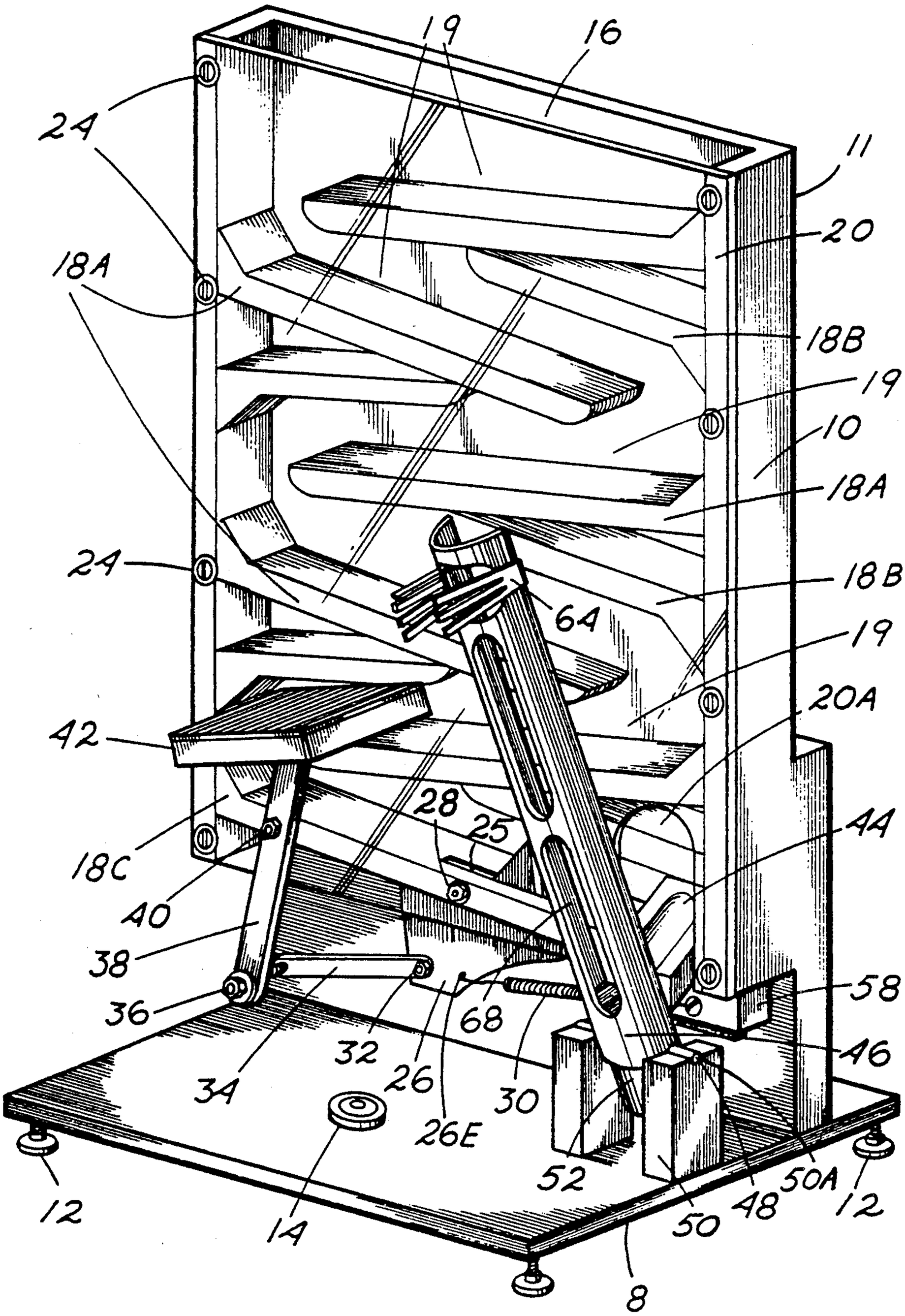

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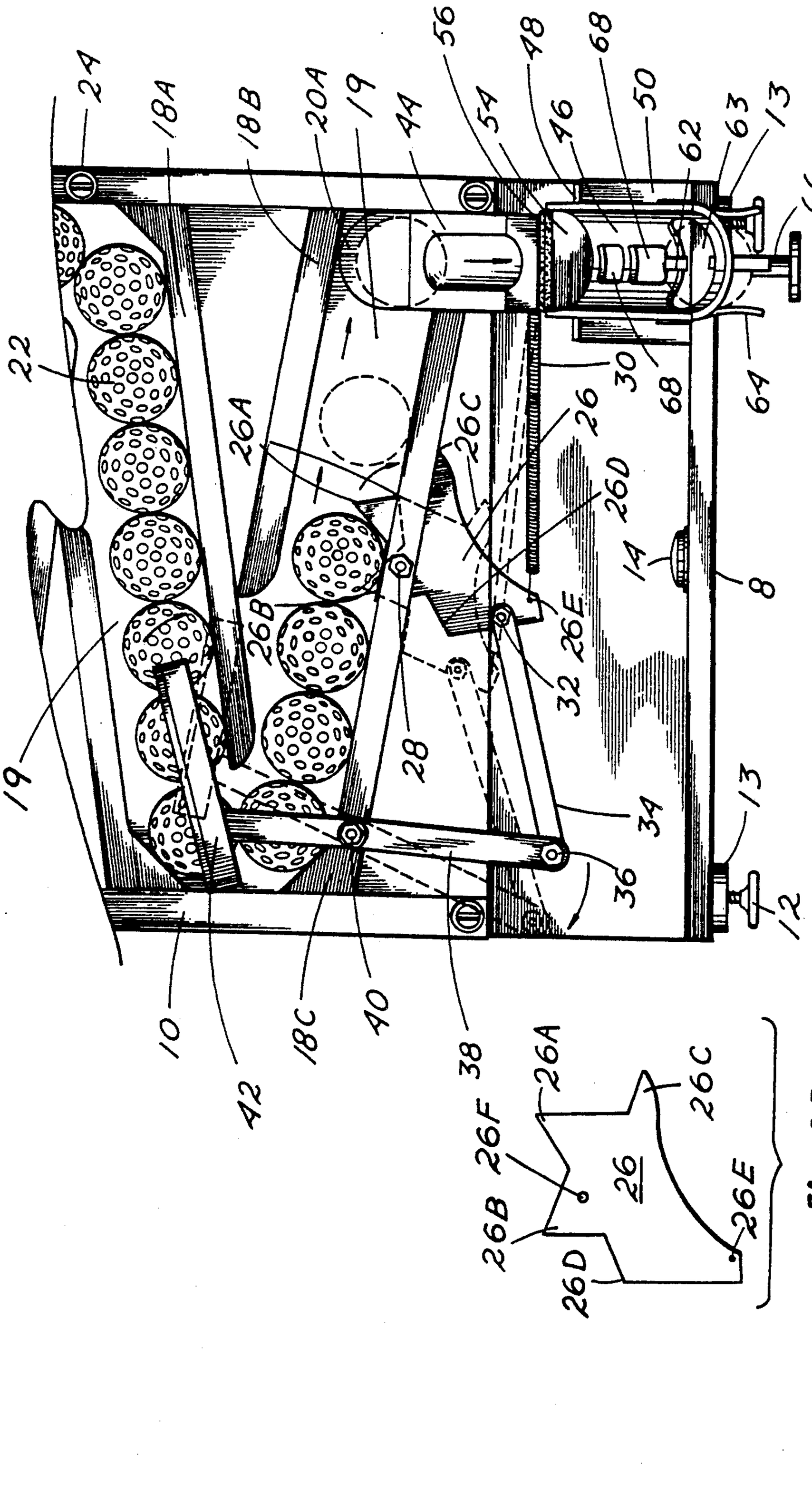
Fig. 1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26C
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Fig. 2A

Fig. 2B

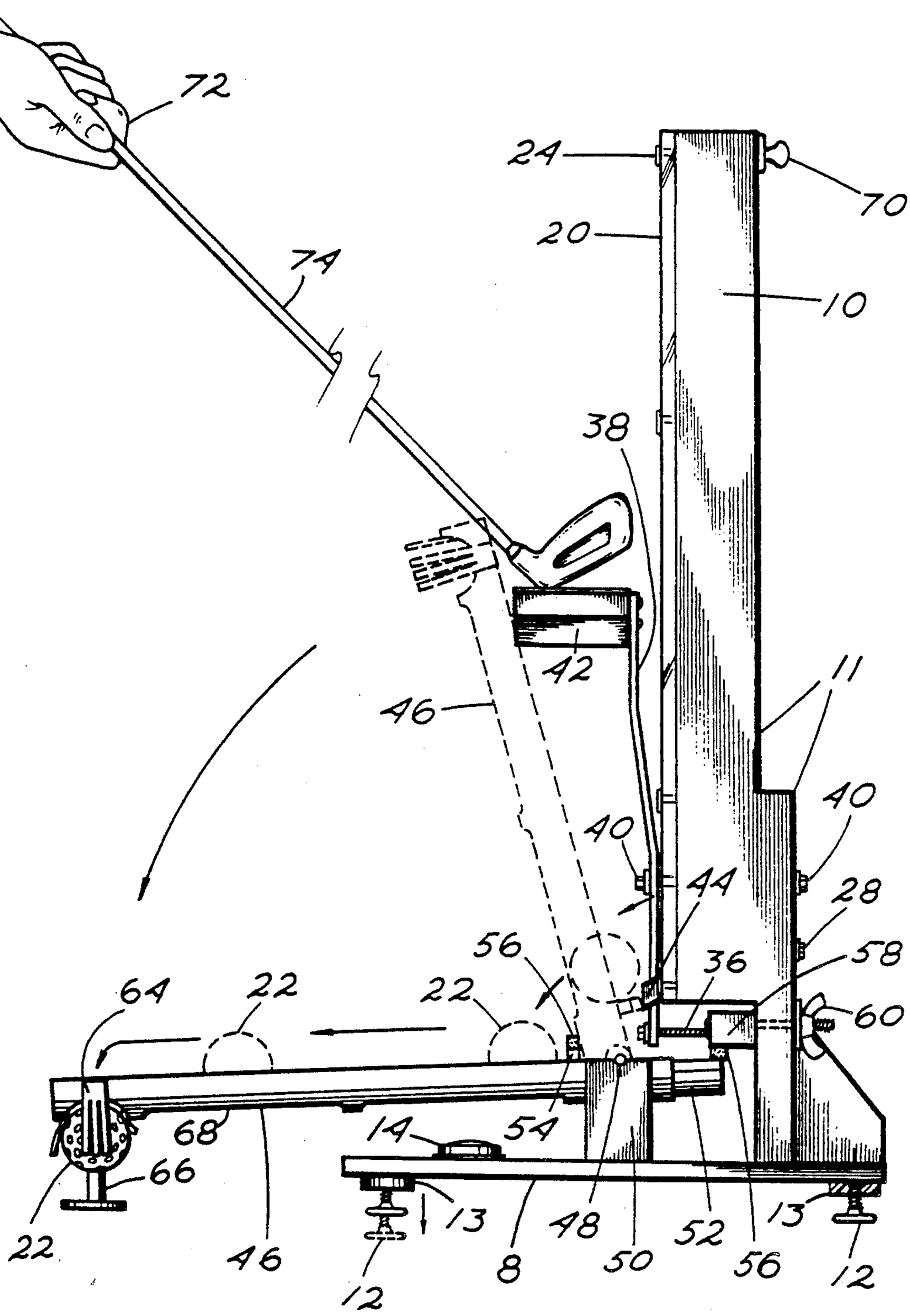
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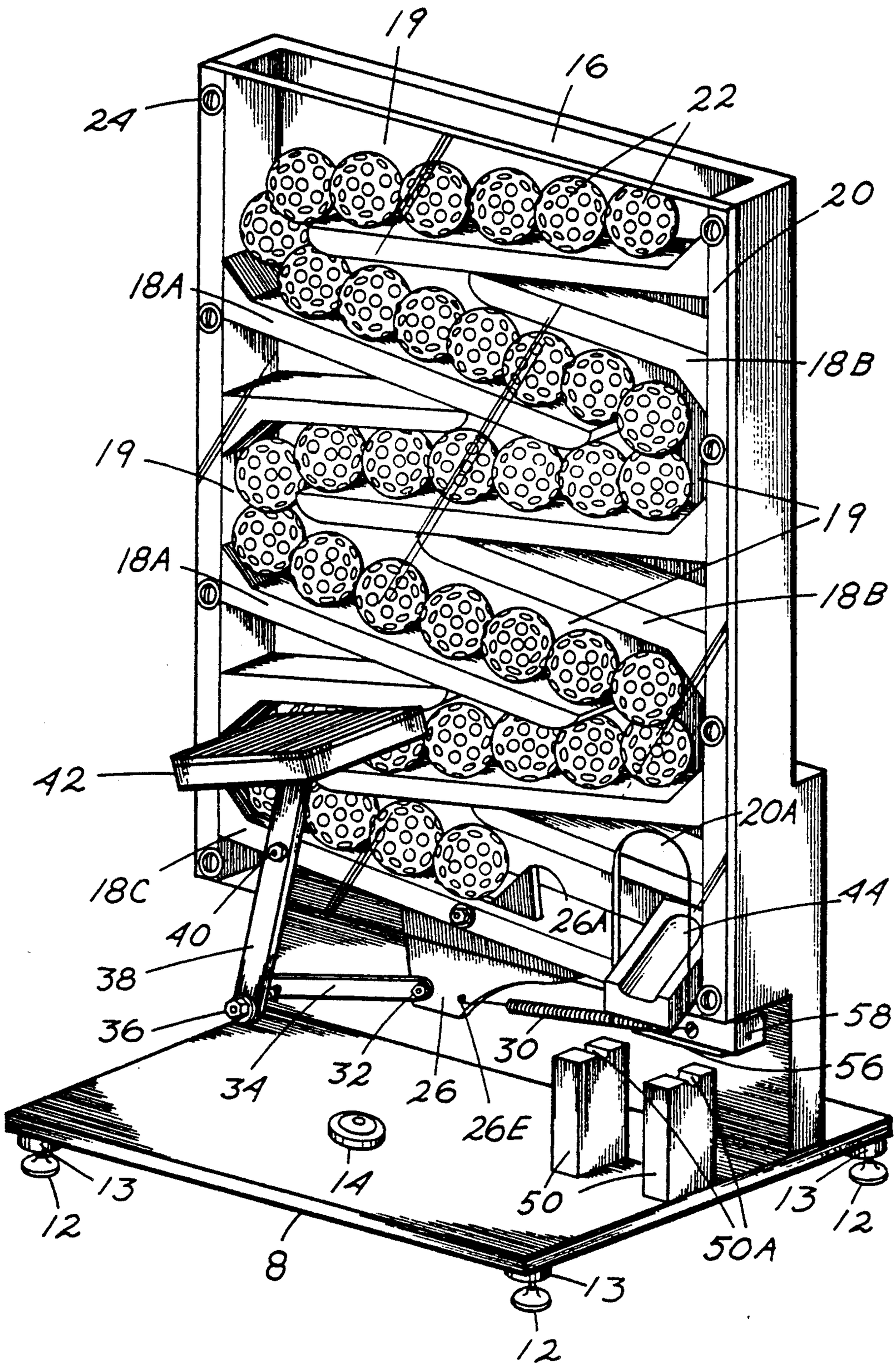
Fig. 3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26E
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Fig. 4

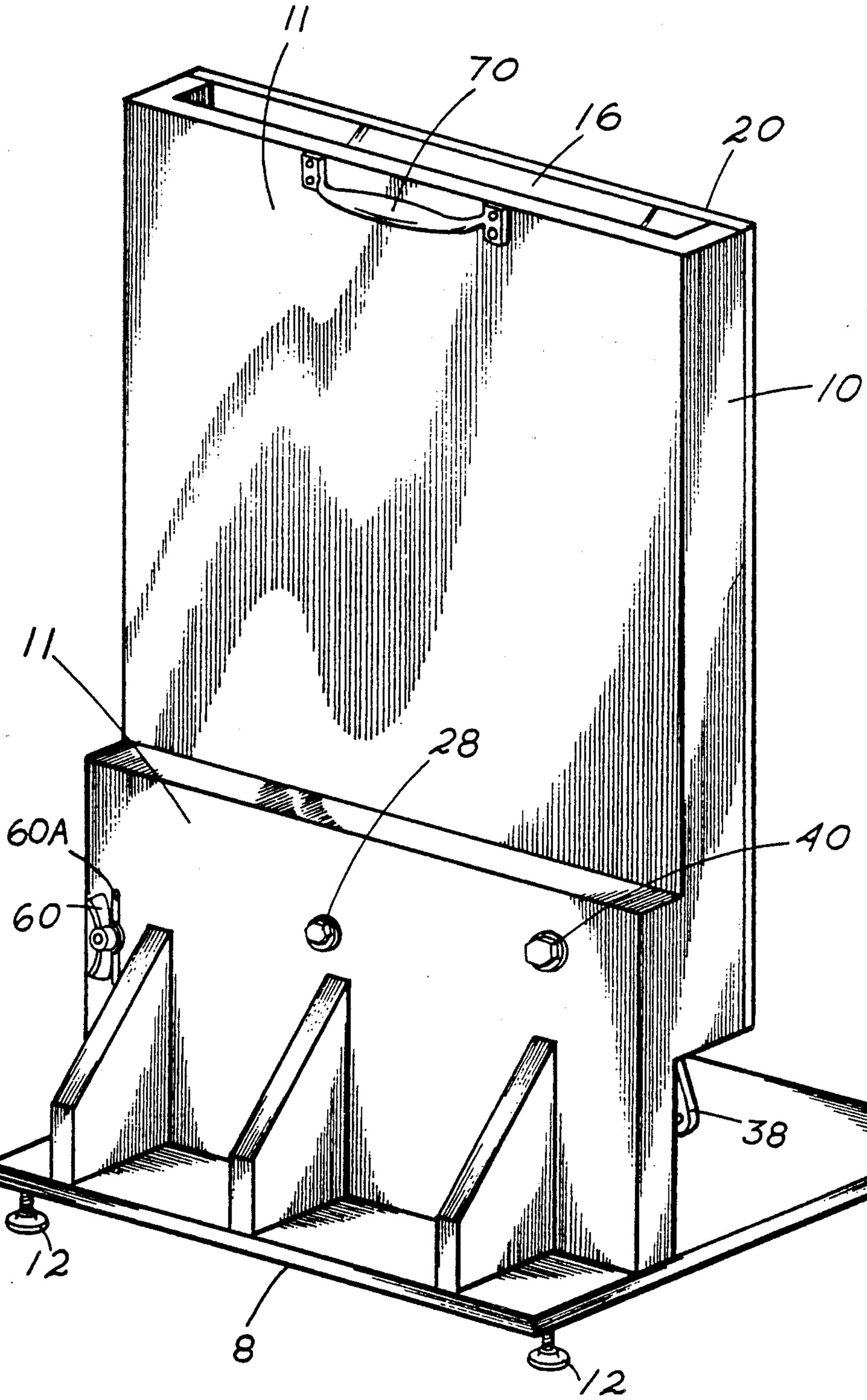

Fig. 5

GOLF BALL DISPENSER AND SETTER

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to the game of golf and equipment therefor, and more particularly to an improved apparatus for mechanically setting a golf ball onto a tee or other playing surface in preparation for hitting the ball with a golf club.

2. Description of the Prior Art

Past art devices structured to place golf balls onto tees, may be placed in two general categories. The first category generally consists of golf ball setting equipment positioned wholly or in part underground, and structured for setting the ball on a golf tee, followed by raising the tee and ball to above ground level for play. The second category generally consists of portable equipment which is positioned generally above ground. The above ground ball setting equipment is structured to lower a golf ball onto on a stationary tee or other playing surface, followed by retracting out of the way of the golfer's swing.

Examples of underground type golf ball setters are found in U.S. Pat. No. 4,355,811 issued Oct. 26, 1982 to Louis E. Williams, Sr., and in U.S. Pat. No. 3,778,067 issued Dec. 11, 1973 to Joseph A. Gentiluomo. The inherent disadvantages of the underground type of apparatus is that they are generally stationary in design, have many moving parts, are relatively expensive to build, install and maintain.

Prior art representing an above ground ball setter is found in U.S. Pat. No. 3,599,983 issued Aug. 17, 1971 to Raymond L. Melton. Melton's portable golf ball setter uses a funnel-like hopper for storing a plurality of golf balls as a supply for feeding the setting portion of the apparatus. Melton's funnel-like storage hopper has been found to be unreliable, in that the balls have a tendency to bind or jam periodically against themselves within the hopper, and consequently fail to dispense properly therefrom.

Melton uses a pivotally mounted ball delivery ramp to deliver a single ball onto a golf tee. The delivery ramp is structured with a counterweight designed to retract the ramp out of the way of the golfer's club swing after the ball is set. Melton's delivery ramp is so mounted on its carriage as to allow its dislocation in the event of an inadvertent conflict with an errant club swing. The disengagable delivery ramp is intended to help prevent accidental damage to the apparatus, however, Melton has placed his golf ball selector means, that which selects one ball at a time and prevents additional stored balls from entering the delivery ramp, on one end of his disengagable ball delivery ramp. If for whatever reason, the delivery ramp is dislocated from the base of the machine, whatever number of balls that are held in the machine, including all hopper-stored balls would be dumped out of the machine and onto the ground. The dislocation of Melton's delivery ramp would allow whatever number of balls left in the apparatus, which could be a substantial number, to be deposited on the ground immediately toward the feet of the golfer, this is of course assuming the balls did not jam in the funnel-like ball storage hopper. The dumping of a large number of golf balls at the golfer's feet would obviously create a safety hazard, a substantial liability risk, and expend the golfer's time and energy in retrieving and replacing the loose golf balls. The Melton golf

ball setter also appears quite elongated, a shape and structure which, unless dismantled would require a substantial amount of floor space for storage of the unit in places such as closets and the like when not in use.

SUMMARY OF THE INVENTION

The improved golf ball dispenser and setter of this disclosure is to assist the practicing golfer in terms of saving time and energy by semi-automatically dispensing and setting a golf ball onto a practice tee or other playing surface. The semi-automatic setting of a golf ball alleviates the need of the golfer to move his feet or grip position on the club which, in turn, allows for a minimal loss in concentration between practice shots, and the need to repeatedly bend over.

My above ground type golf ball setter is highly portable, weighing less than twenty five pounds, and is affixed with a carrying handle to allow the device to be easily manually carried by hand. The structure includes a stabilizing base affixed with adjustable legs for leveling the apparatus prior to use, and a vertically rising, partially transparent, ball storage housing affixed to the upper surface of the base. The ball storage housing is internally baffled to store a large number of golf balls in a zigzagging, vertically rising single column, eliminating the possibility of the balls jamming in the storage housing.

My apparatus further includes a pivotally attached ball selector positioned in part within the lower end of the ball storage housing adjacent a ball dispensing aperture of the housing. My ball selector is generally independent of the other major components of the ball setter, being specifically structured to allow the passing of only one ball at a time, and only when intentionally actuated. The ball selector when actuated, is structured to allow one ball to separate from the column of stored balls and roll downward under the pull of gravity from within the ball storage housing. The single selected golf ball leaves the storage housing through the housing dispensing aperture and comes to land on a first end of an elongated U-shaped, pivotally attached vertically oriented delivery chute. The delivery chute pivots downward under the weight of the dispensed golf ball resting thereon. As the delivery chute pivots and begins to angle downward, the golf ball rolls on the chute. The ball rolls downhill toward a second end of the chute, where the ball drops through an aperture in the delivery chute and is deposited onto either the top of an aligned golf tee or other playing surface. Upon the weight of the ball leaving the delivery chute, a counterweight attached to the first end of the chute causes the chute to pivot or retract back to a generally vertical position, hopefully clear of any wild swings by the golfer. My delivery chute is retained in a manner to allow the chute to disengage when struck by a wide golf swing, and the selector is specifically structured to maintain the stored balls within the ball storage housing even with the delivery chute disengaged.

The relatively small size of my stabilizing base, coupled with and made possible by the vertically rising ball storage housing, and the elimination of the possibility of the stored balls from inadvertently being dumped from the storage housing, allows my device to be easily transported and stored in a small area with a supply of golf balls conveniently stored in the storage housing.

Once the golf ball setter and dispenser is setup and leveled on a suitable playing surface, and the ball stor-

age housing has been initially loaded with a quantity of golf balls, the golfer may direct his attention to play, for instance his stance, the appropriate golf club and his grip on the club. He then merely places the head of his club on a trigger pad of my ball setter, and pushes downward, this without changing his foot position or grip on the club. This downward push on a trigger pad activates a pivotal linkage arrangement which in turn actuates the ball selector which releases one golf ball from the storage housing, and the ball is set onto the top of a golf tee or other playing surface such as the ground or the floor within a building. Even if the trigger pad is retained depressed by the golfer for an extended period of time, the ball selector will only separate and allow the passing of one ball until the trigger pad is released to allow the resetting of the ball selector back into its first position. After the dispensing of a ball and the release of the trigger pad, the set golf ball may be hit by the player, and the single ball release and setting process may be repeated until the stored balls are all used. At that point, the ball storage housing may be reloaded, and the player may continue playing, or he may grasp the handle of the setter and carry it to a suitable location such as a closet for storage.

Therefore a primary object of the invention is to provide an improved golf ball dispenser and setter which operates semi-automatically to set a golf ball onto the top of a tee or other playing surface.

A further object of the invention is to provide the above in an apparatus which is capable of storing a large number golf balls positioned ready for dispensing.

A further object of the invention is to provide the above in an apparatus which stores the large number of balls in a vertical storage housing, with the housing having internal baffles to contain the golf balls in a zigzagging, vertically rising single column.

A further object of the invention is to provide the above in an apparatus which includes a ball selector structured to separate a single ball at a time from the single column of stored balls.

A further object of the invention is to provide the above in an apparatus which includes a pivotally attached delivery chute which is capable of disengaging from the apparatus.

A further object of the invention is to provide the above in an apparatus which includes a ball selector which is capable of retaining the remaining golf balls stored in the housing with the delivery chute disengaged from the apparatus.

A still further object of the invention is to provide the above in an apparatus which is dependable in use, relatively inexpensive to build, and which boxes well for shipping and handling.

Further objects and advantages of my invention will become apparent with a continued reading of the specification and an examination of my included drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the apparatus from the upper right front.

FIG. **2A** is a partial front view of the lower portion of the invention with the ball selector in the first position in solid lines, and in the second position in broken lines. The ball delivery chute is shown in the lower position.

FIG. **2B** is a front view of the specifically shaped ball selector by itself.

FIG. **3** is the right side view of the invention showing the alternate delivery chute positions in solid and broken lines, and the actuation of the ball delivery mode by a golfer with his golf club.

FIG. **4** is perspective view of the invention fully loaded with golf balls which are seen through the transparent front panel of the ball storage housing. The ball delivery chute is disengaged and not shown in this view to illustrate the retainment of the stored balls in the absence of the delivery chute.

FIG. **5** is a rear perspective view of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in general. My golf ball dispensing and setting apparatus is generally comprised of a horizontally disposed stabilizing base **8**, and a vertically rising ball storage housing **10** attached at a ninety degree angle to base **8**. Both base **8** and storage housing **10** are constructed out of a rigid material which is lightweight and durable, such as a plastic, metal, or wood for example. A handle **70** is attached to back panel **11** of ball storage housing **10** to allow convenient carrying of the lightweight apparatus with one hand by an adult.

Attached to the bottom side of base **8** are a plurality of leveling support legs designated height adjusters **12**. Height adjusters **12** are adjustably mounted feet having threaded shanks threadably engaged in threaded bores in downward extensions **13** of base **8**. Downward extensions **13** provide sufficiently elongated threaded bores to allow a wide degree of inward and outward adjusting of height adjusters **12**. By rotatably adjusting the position of each of the height adjusters **12** from base **8**, base **8** may be leveled on a playing surface, which in turn vertically plumbs ball storage housing **10** assuring proper slopes within the apparatus for dependable operation thereof. At least three height adjusters **12** appear necessary, although four are preferred for improved stability. Height adjusters **12** should rotate to be adjusted by the hand of the golfer without a tool, yet be frictionally restrained sufficiently to avoid inadvertent rotation by the continued operation and vibration of the apparatus. A leveling indicator **14** of the liquid and bubble type, may be included as an attached, integral feature of the apparatus, or merely used temporarily during the initial leveling of the apparatus prior to use.

Ball storage housing **10** is a rectangular tube, rigidly attached to the upper side of base **8**. At least front panel **20** of ball storage housing **10** is preferred to be made of transparent plastic to allow viewing of golf balls **22** stored in the housing **10**. Panel **20** may be attached to the side walls of ball storage housing **10** using screws and washers **24** or other suitable fasteners.

Within ball storage housing **10** are a plurality of elongated baffles. The baffles extend widthwise from the interior surface of panel **20** across to the interior surface of back panel **11** of ball storage housing **10**. As shown in FIG. **1**, the internal baffles are designated load bearing baffles **18A**, non-load bearing baffles **18B**, and baffle **18C**, which is the lower most load bearing baffle adjacent base **8**. Load bearing baffles **18A** support the weight of golf balls **22**. Non-load bearing baffles **18B** are positioned above and in spaced relationship to baffles **18A** to prevent one stored ball **22** from transcending balls **22** downhill before it, shown best in FIG. **2** and **4**. Baffles **18A** and **18B** are attached at one end thereof to the interior side wall of ball storage housing **10**, angling toward the oppositely disposed interior side wall of ball storage housing **10**. Baffles **18A** terminate prior to

reaching the side wall opposite the side wall to which they are attached. The space remaining between the terminal ends of baffles **18A** is sufficient to allow the passage of a golf ball between the terminal end thereof and the interior side wall. Baffles **18B** terminate against the bottom side of baffles **18A** as shown in the drawings. Baffles **18A** all slope at a downward angle toward base **8** at a sufficient degree to provide a reliable gravity forced rolling transfer of golf balls **22**, while baffles **18B** slope upward, positioned above baffles **18A**. The spacing between baffles **18A** and **18B** is generally equal to that of the diameter of a golf ball **22**, with a small amount of extra free space provided to assure free rolling of balls **22** between the baffles **18A** and **18B**.

The placement of baffles **18A** and **18B** within ball storage housing **10** provides an open channel **19**. Open channel **19** is a zigzagging open channel structured to guide and organize a plurality of golf balls **22** placed in ball storage housing **10** into a zigzagging, vertically rising single column of balls **22** as shown in FIG. **4**. The zigzagging, vertically rising single column of stored golf balls **22** provides for a large number of balls **22** to be stored in a relatively small space, and has proven to be a "jam" free arrangement.

Ball storage housing **10** is open at the top end thereof to allow the installation of golf balls **22**. The opening is designated ball installation opening **16**, with opening **16** also capable of being used to quickly remove the balls **22** from storage housing **10** by manually picking the apparatus up, and inverting it to allow all stored balls **22** to roll out of housing **10**. Opening **16** is in communication with the upper end of open channel **19**, and ball dispensing aperture **20A** is in communication with the lower end of open channel **19**. An openable door over opening **16** of course may be used, but is not seen to be necessary at this time. To install golf balls **22** into ball storage housing **10**, balls **22** are simply dumped into housing **10**, and baffles **18A** and **18B** guide, organize, and retain the balls **22** into a zigzagging single column.

When a plurality of golf balls **22** are stored within ball storage housing **10**, the balls **22** are prevented from exiting housing **10** through ball dispensing aperture **20A** in cover panel **20** by a specifically shaped plate designated selector **26**. Selector **26** is positioned in part in baffle **18C** shown best in FIG. **2A**. Selector **26** is positioned between ball dispensing aperture **20A** and the column of stored balls **22** within open channel **19**. Selector **26** should be made of a generally thin, rigid material such as plastic or metal, and is shaped as shown in the front view thereof in FIG. **2B**. A plate material of about $\frac{1}{8}$ to $\frac{1}{4}$ inch thick is adequate from which to manufacture selector **26**.

Selector **26** is positioned through a generally centered, elongated aperture or slot **25** Which extends upward through baffle **18C** shown best in FIG. **1**. Selector **26** is pivotally attached with a bolt **28** through aperture **26F** in selector **26**. Bolt **28** extends through panel cover **20**, baffle **18C** and back panel **11**, and is secured in place with a nut. Bolt **28** serves as an axle for selector **26** to rotate on, and is sized slightly smaller in diameter than aperture **26F**. Pivotal attachment structures other than bolt **28** of course may be used to pivotally mount selector **26**.

As seen in FIGS. **2A** and **2B**, selector **26** is structured to provide a forward ball stop tooth **26A**, a rearward ball stop tooth **26B**, a forward pivot stop shoulder **26C** and a rearward pivot stop shoulder **26D**. Slot **25** in baffle **18C** extends parallel with the longitudinal dimension of baffle **18C**, and should be made only long enough and wide enough relative to the dimensions of selector **26** to provide sufficient clearance for unhindered operation of the selector. The dimensions of selector **26** will in-part depend on the thickness of the material used for baffle **18C**. As can be seen in FIG. **2A**, whatever thickness material is used for baffle **18C**, forward ball stop tooth **26A** should be at its apex when forward pivot stop shoulder **26C** is abutted against the bottom surface of baffle **18C** beyond the length of slot **25**. Furthermore, the dimensions of selector **26** will depend in-part on the rearward ball stop tooth **26B** being at its apex when rearward pivot stop shoulder **26D** is abutted against the bottom surface of baffle **18C** beyond the length of slot **25**. The abutments of forward pivot stop shoulder **26C** and rearward pivot stop shoulder **26D** are made possible by the length of selector **26** across its width between the terminal ends of stop shoulders **26C** and **26D** being wider than the length of slot **25**. Aperture **26F** in selector **26** for bolt **28** is placed so that when forward ball stop tooth **26A** is at its apex with forward pivot stop shoulder **26C** abutted against the bottom surface of baffle **18C**, the rearward ball stop tooth **26B** is recessed slightly below the top surface of baffle **18C**. Alternatively, the pivot point of selector **26** is placed so that when rearward ball stop tooth **26B** is at its apex with rearward pivot stop shoulder **26D** abutted against the bottom surface of baffle **18C**, forward ball stop tooth **26A** is recessed slightly below the top surface of baffle **18C**. Forward ball stop tooth **26A** and rearward ball stop tooth **26B** when in the raised positions above the top surface of baffle **18C** should protrude high enough into open channel **19** to reliably and consistently stop the series of golf balls **22** within ball storage housing **10** in their gravity forced rollable path. Forward ball stop tooth **26A** and rearward ball stop tooth **26B** form a "V" configuration which acts to select a ball **22**, and control the downward, rollable movement of the selected golf ball **22**, and the other stored balls **22** the path through the apparatus. Forward pivot stop shoulder **26C** and rearward pivot stop shoulder **26D** should be prominent enough to limit the forward and rearward rotation of selector **26** at its extreme alternate positions when in operation. In FIG. **2A**, selector **26** is shown in solid lines at its forward or "first" position preventing the release of the first ball in the column with the upward extended tooth **26A**. Also in FIG. **2A**, selector **26** is shown in dotted lines at its retracted or "second" position to allow the passage of a single golf ball **22** from within the "V" of the selector **26**. With selector **26** retracted, the second golf ball **22** in the column of balls is prevented from following the selected ball by the now upwardly extending rearward ball stop tooth **26B**. After a single ball **22** has been allowed to pass through selector **26**, selector **26** is returned by an extension spring **30** to its first or normal position, limited in its returning motion by the abutment of forward pivot stop shoulder **26C** against the bottom surface of baffle **18C**.

Return spring **30** is attached at one end thereof to point **26E** of selector **26**, and the opposite end of spring **30** is attached to any suitable location which will allow spring **30** to return selector **26** to its first position after the passage of a single ball **22**. In the drawings, the other end of spring **30** is attached to stop block **58**. The strength of spring **30** should be sufficient to return and retain selector **26** in its first position, yet not so strong as to require more than a slight depressing effort by the

golfer with the end of his hand **72** held golf club **74** to activate the apparatus. The actuation of selector **26** will be detailed further.

As shown best in FIGS. **1** and **2A**, selector **26** is attached to one end of selector linkage **34**, a flat, horizontally oriented rigid plate or bar, by a pivotal connection designated linkage pivot **32**. Linkage pivot **32** may be made using a bolt through apertures in linkage **34** and selector **26**, and with washers and a nut. The oppositely disposed end of selector linkage **34** is pivotally attached to trigger lever **38**, which is a rigid, vertically oriented flat plate or bar. The connection between lever **38** and linkage **34** is made by linkage pivot **36**, which may also be a bolt, washer and nut arrangement. As shown in FIG. **1**, and partially shown in FIG. **3**, the bolt or axle used to form the linkage pivot connection **36** is elongated to provide an offset between the linked together ends of linkage **34** and trigger lever **38**, with the offset necessary due to the plane in which selector **26** rests, relative to the plane in which trigger lever **38** rests.

At a point somewhat centered between the two oppositely disposed ends of trigger lever **38**, lever **38** is pivotally attached to baffle **18C** at the trigger pivot **40**. Trigger pivot **40** may be a bolt set through ball storage housing **10**. As shown in FIG. **2A**, the affixment of trigger lever **38** is off to one side of ball storage housing **10** with the lever **38** extending upward generally vertically, but at a slight angle. The slight angle of lever **38** positions the upper end thereof more toward the center of storage housing **10** than the bottom end of the lever **38**. This angling assures the proper direction of movement when trigger lever **38** is actuated by the golf club **74** of a golfer. The closest to a vertical position trigger lever **38** may reach is determined by the abutment of forward pivot stop shoulder **26C** of selector **26** against the bottom surface of baffle **18C**.

As shown in FIG. **1**, affixed to the upper end of trigger lever **38** is a trigger pad **42**. Trigger pad **42** is securely attached to the trigger lever **38** to withstand the rigors of continual use. Trigger pad **42** should be of a size to allow the setting of a golf club **74** on its top surface with a large margin for error of golf club **74** placement. At least the top surface material used for trigger pad **42** should be of a resilient, non-slip nature, such as plastic or rubbery material, yet not of a hardness which could scratch or mar golf club **74**. Trigger pad **42** and the top end of the trigger lever **38** are set and attached at an angle which would best accommodate as close to a vertical motion as possible when used to direct movement of the golf club **74** in a downward motion rather than from side to side. This will help alleviate the apparatus from moving from its set position due to the operational force necessary to activate trigger lever **38**.

Referring now to FIG. **2A** and **3**. In order to activate selector **26** to release a single ball **22** from the column of stored balls **22**, a golfer places his club **74** against the top of trigger pad **42** and presses downward. With downward pressing, trigger lever **38** pivots, thereby pulling linkage **34**, defeating spring **30**, which in turn retracts selector **26** allowing a single ball **22** to pass. The golfer then pulls his club **74** from trigger pad **42**, and spring **30** returns both selector **26** and trigger lever **38** to the normal position. Even if the golfer maintains trigger pad **42** downward after one ball **22** has been released, rearward ball stop tooth **26B** will prevent any additional balls **22** from passing as may be ascertained from closely examining the dotted line drawing of selector **26** in FIG. **2A**.

After a single ball **22** has been allowed to pass beyond selector **26**, the selected ball **22** rolls from baffle **18C** onto a short loading ramp **44**. Loading ramp **44** is attached at the lowest end of baffle **18C** to allow the ball **22** to roll from baffle **18C** onto ramp **44**. Loading ramp **44** is positioned partially within open channel **19** and partially extending through ball dispensing aperture **20A**, and may be considered a part of the baffles which form open channel **19**. Loading ramp **44** has a greater downward pitch than that of baffles **18A** and **18C**, and is set perpendicular to baffle **18C** to alter the downward, rolling path of the selected golf ball **22** through ball dispensing aperture **20A** shown best in FIG. **4**. Loading ramp **44** may be made with an elongated trough shaped surface on its upper side to better direct the path of the golf ball **22**.

Pivotally attached adjacent the distal end of loading ramp **44** is an elongated, U-shaped or trough-like delivery chute **46** which is structured to receive and guide a ball **22** from loading ramp **44**, with the weight of the received ball **22** causing chute **46** to pivot downward, with the downward pivoting causing the ball **22** to roll toward the second or distal end of chute **46** where the ball **22** is first slowed in its rolling rate by having to roll over the top of a flexible finger brake **62** subsequent to dropping downward through an aperture **63** in the distal end of delivery chute **46**. As the ball **22** drops through aperture **63**, a plurality of flexible extensions or fingers **64** surrounding the underside of aperture **63** stabilize the falling ball **22** against any side to side motion to allow setting the ball onto the top of an aligned golf tee **66** in such a manner that the ball will remain on the top of tee **66**. Extensions **64** function similar to the netting around a basket ball hoop. After the ball is set, a counterweight **52** retracts chute **46** back into a near vertical position. As shown in FIG. **1**, delivery chute **46** may be lightened with holes **68** in the bottom surface of the chute **46**.

Delivery chute **46** can best be seen in FIG. **1** in a retracted state, and in FIG. **2A** in a lowered state. FIG. **3** shows delivery chute **46** in a lowered state in solid lines over a tee **66**, and in a retracted state in dotted lines. As can best be seen in FIG. **3**, delivery chute **46** may pivot on delivery chute pivot axle **48** attached to first end of chute **46** adjacent storage housing **10**, from a near vertical or retracted position to a less than horizontal or lowered position. In the lowered position, the distal end of delivery chute **46** is lowered below axle **48** and the first end of the chute **46**. Delivery chute **46** is supported near its first end by axle **48** which extends outward from two oppositely disposed side edges of chute **46**. Axles **48** may be made of steel. Axle **48** rests on top of two chute support blocks **50** which are attached to the top surface of base **8**. Each support block **50** has a notch **50A** at the top end thereof to releasably receive and retain axle **48** with chute **46** positioned between the two blocks **50**. Axle **48** rests loosely in notches **50A**, with the loose resting therein allowing chute **46** to be easily disengaged or removed when struck by a wild golf swing or lifted by hand. In FIG. **4**, delivery chute **46** is removed from blocks **50**, and notches **50A** for axle **48** may be easily viewed.

Delivery chute **46** in its normal position rests in a near vertical position due to the weight distribution adjusted through the use and placement of counterweight **52**. Chute **46** is automatically retracted to the near vertical

position after a ball **22** leaves the chute **46** by counterweight **52** affixed to the first end of chute **46**. Counterweight **52** pulls chute **46** to a near vertical position, with the limit to which delivery chute **46** may approach a vertical position being controlled by a stop block arrangement. The stop block arrangement is comprised of an extending block **54** attached within the "U" of chute **46** between axle **48** and the distal end of chute **46**, with block **54** aligned to abut the distal end of loading ramp **44** best seen in FIG. **3**. Block **54** is padded on its distal end with padding **56** to serve as a vibration dampener. As counterweight **52** causes delivery chute **46** to pivot or retract toward a vertical position after the delivery of a ball **22** onto a playing surface, padding **56** of block **54** abuts the distal end of loading ramp **44** and prevents chute **46** from reaching a completely vertical position. The near vertical, yet slightly angled position of chute **46** in its normal position is that the distal end of the chute **46** leans more toward the playing surface or tee **66** than the weighted first end of the chute **46**. The near vertical positioning of delivery chute **46** assures the chute **46** of pivoting in the proper direction toward the playing surface upon receiving the weight of a ball **22**. As may be ascertained from the drawings, block **54** is positioned in chute **46** so that when chute **46** is in the near vertical position with pad **56** and block **54** abutted or directly adjacent the ball dispensing end of loading ramp **44**, block **54** is positioned slightly below the top surface of ramp **44**. When a ball **22** leaves ramp **44**, the ball **22** drops onto block **54** which serves as a floor on which the ball may momentarily rest as chute **46** begins to pivot downward under the weight of the ball **22**.

The degree to which delivery chute **46** may angle downward to place a ball **22** onto a playing surface is controlled by a second stop block arrangement. This second stop block arrangement is comprised of stop block **58** adjustably attached to ball storage housing **10** directly below loading ramp **44**. Stop block **58** also has padding **56** affixed thereto to serve as a vibration dampener. Stop block **58** is aligned and positioned to provide an abutment surface for counterweight **52** to strike as delivery chute **46** moves into a downwardly sloped position to set a ball **22** onto a playing surface. The abutment of counterweight **52** against padding **56** on the underside of stop block **58** restricts the degree of downward slope delivery chute **46** may reach. This degree of downward slope is adjustable to allow a player to set delivery chute **46** to either set a ball **22** onto the top of a golf tee **66**, or onto the floor or ground. Delivery chute **46** must be allowed to pivot into a steeper slope to set a ball **22** onto a floor or ground playing surface as opposed to an extending tee **66**. In order to allow the degree of downward slope chute **46** must reach in setting a ball **22**, stop block **58** is adjustably positioned. As shown in FIGS. **3** and **5**, stop block **58** is adjustably attached to a lower portion of ball storage housing **10**, and more precisely back panel **11**, using a bolt and wing nut **60** arrangement through an elongated vertically oriented slot **60A** in back panel **11**. By loosening the wing nut, stop block **58** may be repositioned upward or downward, thus controlling the maximum down slope delivery chute **46** may reach when setting a ball **22**.

Delivery chute **46** has a length suited to delivering a golf ball **22** to a golf tee **66** a sufficient distance away from base **8** to provide for clearance for the golfer's club swing, and chute **46** when it is in its near vertical position for the apparatus not to be a distraction for the golfer. Delivery chute **46** may be made of a lightweight and somewhat resilient plastic to provide durability of the part.

The materials used to manufacture the individual components of the invention should all be durable and lightweight in order to keep the total weight of the apparatus to less than 25 pounds, and allow the apparatus to operate suitably for a reasonable number of years.

Although I have very specifically described the preferred structures of the invention, it should be understood that the specific details are just that, "preferred" structures given for example to those skilled in the art. Many minor changes in the specific structures described may obviously be made without departing from the scope of the invention, and therefore it should be understood that the scope of the invention is not to be limited by the specification and drawings given for example, but is to be determined by the spirit and scope of my appended claims.

What I claim as my invention is:

1. An improved golf ball dispenser and setter apparatus sufficiently lightweight to be carried by hand, comprising;

a stabilizing base having a golf ball storage housing affixed to a top side thereof, said storage housing being a generally rectangular structure having internal baffles, said storage housing in an upper end thereof having an access opening providing means to allow insertion of golf balls into said storage housing, said storage housing having a ball dispensing opening positioned in a lower end thereof, said internal baffles positioned within said storage housing to form a vertically rising zigzagging open channel extending between said access opening and said ball dispensing opening, said zigzagging open channel sized and structurally arranged to organize and guide golf balls inserted into said storage housing through said access opening into a vertically rising zigzagging single column of golf balls;

a golf ball selector means, said selector means being a movably mounted member extending into said zigzagging open channel at said lower end of said storage housing, at least a portion of said selector means shaped and positioned within said zigzagging open channel to prohibit the passing of golf balls beyond said selector means and out said ball dispensing opening with said selector means in a first position, said selector means further structured to be repositioned into a second position, said selector means having means to select and allow passage of a single golf ball from a zigzagging single column of golf balls within said storage housing with repositioning of said selector means from said first position to said second position, ball directing means to direct a selected golf ball through said ball dispensing opening;

selector positioning means, said selector positioning means being a pivotal lever and linkage arrangement connected to said selector means, said selector positioning means including a pad positioned to allow pressing thereon by a golf club, said selector positioning means having means to reposition said selector means from said first position to said second position upon pressing on said pad;

biasing means of returning said selector means from said second position to said first position;

a ball delivery chute removably and pivotally affixed adjacent said ball dispensing opening, said ball delivery chute positioned to receive a golf ball

exiting said storage housing through said ball dispensing opening, said ball delivery chute having means actuated by receipt of a golf ball to pivotally move over a playing surface and to deposit the received golf ball onto the playing surface;

biasing means providing retraction of said ball delivery chute after depositing of a golf ball onto a playing surface;

said selector means further having means preventing inadvertent passage of golf balls with said ball delivery chute removed.

2. An improved golf ball dispenser and setter apparatus according to claim 1 wherein said biasing means of returning said selector means includes an extension spring.

3. An improved golf ball dispenser and setter apparatus according to claim 1 wherein said biasing means providing retraction of said ball delivery chute includes a weight.

4. An improved golf ball dispenser and setter apparatus sufficiently lightweight to be carried by hand, comprising;

a golf ball storage housing on a stabilizing base, said storage housing having an access opening providing means to allow insertion of golf balls into said storage housing, said storage housing having a ball dispensing opening;

a golf ball selector means, said selector means being a movably mounted member extending into said storage housing, at least a portion of said selector means shaped and positioned within said storage housing to prohibit the passing of golf balls beyond said selector means and out said ball dispensing opening with said selector means in a first position, said selector means further structured to be repositioned into a second position, said selector means having means to select and allow passage of a single golf ball from golf balls within said storage housing with repositioning of said selector means from said first position to said second position, said storage housing having means to direct a selected golf ball through said ball dispensing opening;

selector positioning means, said selector positioning means being a movable linkage arrangement connected to said selector means, said selector positioning means having means to reposition said selector means from said first position to said second position with the repositioning activatable by a person;

a ball delivery chute removably and pivotally affixed to receive a golf ball exiting said storage housing through said ball dispensing opening, said ball delivery chute having means to move over a playing surface and to deposit a received golf ball onto the playing surface;

means providing retraction of said ball delivery chute after depositing of a golf ball onto a playing surface;

said selector means further having means preventing inadvertent passage of golf balls with said ball delivery chute removed.

5. An improved golf ball dispenser and setter apparatus sufficiently lightweight to be carried by hand, comprising;

a golf ball storage housing on a stabilizing base, said storage housing having internal baffles, said storage housing in an upper end thereof having an access opening providing means to allow insertion of golf balls into said storage housing, said storage housing having a ball dispensing opening positioned in a lower end of said storage housing, said internal baffles positioned within said storage housing to form a vertically rising zigzagging open channel extending between said access opening and said ball dispensing opening, said zigzagging open channel sized and structurally arranged to organize and guide golf balls inserted into said storage housing through said access opening into a vertically rising zigzagging single column of golf balls;

a golf ball selector means, said selector means being a movably mounted member extending into said zigzagging open channel at said lower end of said storage housing, at least a portion of said selector means shaped and positioned within said zigzagging open channel to prohibit the passing of golf balls beyond said selector means and out said ball dispensing opening with said selector means in a first position, said selector means further structured to be repositioned into a second position, said selector means having means to select and allow passage of a single golf ball from a zigzagging single column of golf balls within said storage housing with repositioning of said selector means from said first position to said second position, means to direct a selected golf ball through said ball dispensing opening;

selector positioning means providing means to reposition said selector means from said first position to said second position upon actuation by a person;

a ball delivery chute movably affixed to receive a golf ball exiting said storage housing through said ball dispensing opening, said ball delivery chute having means to move over a playing surface and to deposit a received golf ball onto the playing surface.

6. An improved golf ball dispenser and setter apparatus sufficiently lightweight to be carried by hand, comprising;

a golf ball storage housing on a stabilizing base, means to allow insertion of a supply of golf balls into said storage housing, said storage housing having an opening suitable for dispensing a golf ball from within said storage housing;

a golf ball selector means, said selector means positioned at least partially within said storage housing, at least a portion of said selector means shaped and positioned within said storage housing to prohibit the passing of golf balls beyond said selector means and out said opening with said selector means positioned in a first position, said selector means further structured to be repositioned into a second position, said selector means having means to select and allow passage of a single golf ball from golf balls within said storage housing with repositioning of said selector means from said first position to said second position;

selector positioning means, said selector positioning means connected to said selector means, said selector positioning means having means to reposition said selector means from said first position to said second position;

means of activating said selector positioning means to reposition said selector means, said means of activating said selector positioning means being activatable by a person;

a ball delivery chute removably and pivotally affixed to receive a golf ball exiting said storage housing

through said opening, said ball delivery chute having means to move over a playing surface and to deposit a received golf ball onto the playing surface;

means providing retraction of said ball delivery chute after depositing of a golf ball onto a playing surface;

means preventing inadvertent passage of golf balls with said ball delivery chute removed.

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